

Dramatic Energy Savings - Garage/Canopy Lights

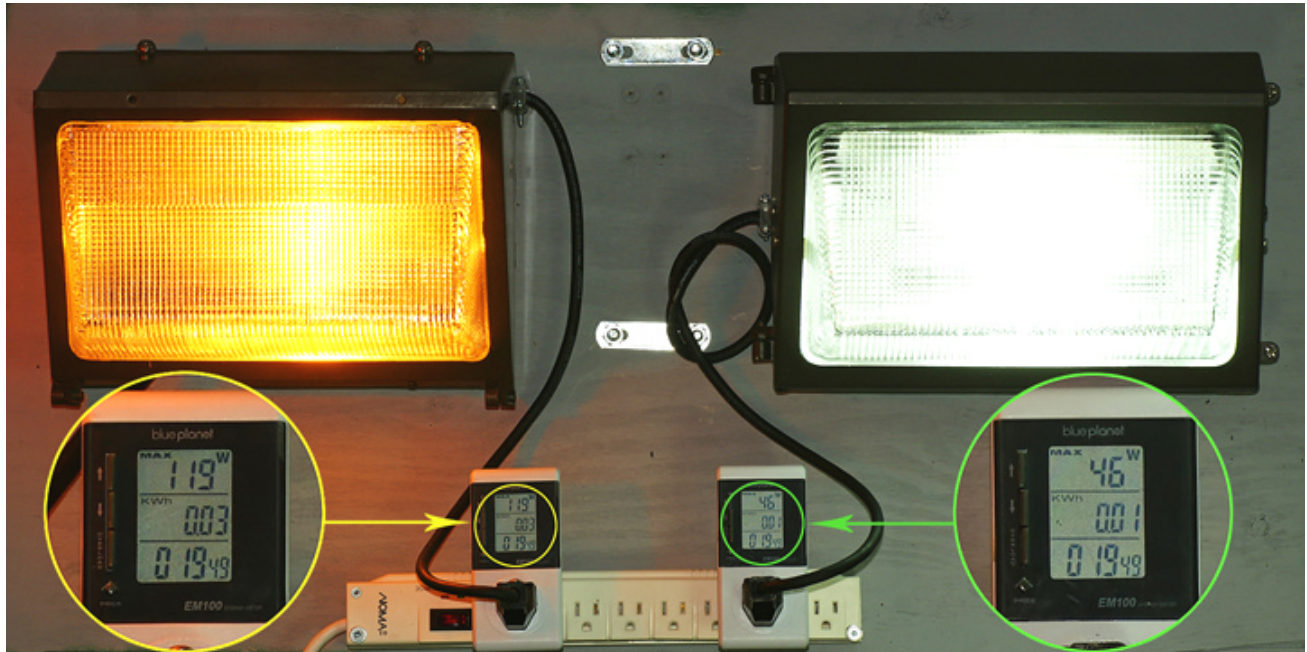


Upper Photo: Demonstration Garage/Canopy Light prop built for an appearance on the CBC TV show "Dragons Den". Our appearance will be broadcast in the fall 2009 season giving us national TV exposure to a business oriented audience.

The model parking garage on the left is lit with a conventional 150W High Pressure Sodium Fixture - the one on the right is lit by the GreenTech, patent-pending, dual-level, 90W Induction fixture with sensor. The difference in colour rendering and light levels is readily apparent.

Lower Photo: Watt meters showing that the "150W" HPS fixture on the left is actually consuming 263W of power, while the GreenTech Fixture on the right is consuming only 86W of power at full output - a **67.3% savings**. When operated by the sensor only as needed, energy savings can be expected to be even more dramatic.

Dramatic Energy Savings - Wallpacks



Wallpacks: This photo shows a side-by-side comparison of Wallpack fixtures commonly used on the exterior of buildings as security/perimeter lighting.

Left: A 70W High Pressure Sodium Wallpack. The insert photo of the watt meter shows that it is consuming 119W of energy (ballast included) while producing 4,389 Visually Effective Lumens (VEL) of light.

Right: A GreenTech 40W magnetic induction light Wallpack. The insert photo of the watt meter shows that it is only consuming 46W of energy (ballast included) while producing 5,994 Visually Effective Lumens (VEL) of light. Note the more natural and pleasant colour produced by our Wallpack fixture.

The GreenTech Fixtures magnetic induction lighting technology Wallpack produces over **26% more light** while **using 62.2% less energy!**

Application Example - Retail Store Lighting

The retail location is a small custom embroidery and fabric item gifts store. The type of work being done relies on fine vision for dealing with small stitching. Colour rendering is an important issue when matching the colours of embroidered corporate logos. The owner and staff of the store complained that the lighting was not bright enough over the embroidery machines and was also uneven - especially in the far corners of the store (see photo below).



BEFORE: Retail store lit with existing fluorescent troffer lights and halogen track-lights



AFTER: Retail store lit with Magnetic Induction Lowbay fixtures and LED track-lights after lighting renovations.

The total electrical load of the old fluorescent lighting in the retail area and the halogen track lights was 1,150 Watts (1.15 kWh). The electrical load of the new magnetic induction and LED lighting installed in the premises is 717 Watts (.717 kWh), an energy reduction of 433 Watts - more than a **37% energy savings!**

Average light levels were improved from 365.8 to 595.5 Lux - more than **55% brighter!** Staff and management were delighted with the improvement in lighting levels.

Application Example - Warehouse Lighting

This manufacturing facilities occupy a total space of 2,972 square meters (32,000 square feet) - only the lighting in the pre-production area was renovated. The area was lit by eight, poorly placed, 400 watt, Mercury Vapour highbay lighting fixtures. In addition to the highbays, there were two, 250 Watt, incandescent lights attached to the ceiling and connected to the power by means of plugs and sockets. These security lights were on a breaker and operated 24/7.



BEFORE: Five of the highbay lights that were replaced can be seen in the photo. Note the greenish cast to the lighting which is characteristic of Mercury vapour lights.



AFTER: Nine of the induction lamp 200W highbay light fixtures can be seen in this photo.

The original eight, 400 watt Mercury Vapour highbay lights and the two 250 watt incandescent security lights, which consumed a total of 4,100 watts, were replaced with a mix of magnetic induction lamp 200 watt Highbay fixtures and 40 watt security fixtures. The lighting electrical load was reduced to a total of 3,186 watts (3.186 kWh) - an energy **savings of about 22%**. The average lighting levels in the area increased from 130.3 Lux to 257.5 Lux - a **brightness increase of about 98%**.

Every Kilowatt Counts - Small Office Parking Lot

A small insurance brokers office was seeking ways in which to cut energy costs. An audit of exterior lighting shows that the parking lot was lit with dual PAR, incandescent, “garden spot” type fixtures. As a first step, two of these dual spotlight fixtures were removed and replaced with 40W Magnetic induction Light fixtures.

The second phase will remove the remaining spotlights (at the top left of the photo below) and replace them with a partial-cut off Wallpack fixture such that the windows of the building opposite the left side wall (not shown) are not illuminated at night.



DURING RENOVATIONS: The rear of this insurance office was originally lit with 3 sets of dual 100W floodlight fixtures the same as seen at the top left of the photo (orange looking incandescent lamps - soon to be replaced with an induction lamp fixture). Two sets of these have been removed and replaced with two 40W under-canopy Induction lighting fixtures (towards the right on either side of the rear entrance). Note that the area lit by the induction lamps appears much brighter and has a more natural colour balance.

In the photo above, two of the original three dual 100W spotlights fixtures have been replaced with the third fixture (top left) scheduled for replacement shortly. The total load for these three fixtures was 600W. The load has already dropped to only 282W with the installation of the two Induction Lamp fixtures. When the third 40W induction lamp fixture is installed, the load will drop to 123W.

In it's unfinished condition (as shown in the photo), this renovation represents an energy savings of about 53%. The average lighting levels in the area have a brightness increase of about 64%. When completed, the renovation will produce an energy savings of over 79%
